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Classification Shifting through Extraordinary Items: Evidence from Japan

Chien-min Kevin PAN*

Abstract

This paper investigates the behavior of Japanese firms' reporting on extraordinary items. The existing literature argues and shows that Japanese firms manage earnings through sales of marketable securities and fixed assets. In contrast, I present evidence that, although consistent with this previous literature, also takes into account extraordinary items and suggests that Japanese firms sell assets with unrealized holding gains or losses to increase or decrease, respectively, current period earnings. Our evidence shows that sale of assets with unrealized gains or losses was a viable tool for earnings management before mark-to-market accounting and impairment came into the Japanese GAAP after fiscal 2000. Our results are robust after controlling for sales, sales changes, cost of goods sold and selling, general and administrative expenses.

Keywords: Extraordinary Items, Classification Shifting, Statement of Income, Earnings Management

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1. Introduction

In this paper I investigate the behavior of Japanese firms' reporting on extraordinary items (*tokubetsu son-eki*). With the business convention in Japan that considers "ordinary income" (i.e., income before extraordinary items) as the most important earnings index (i.e., core earnings), I find that (1) Japanese firms consistently report more extraordinary losses than gains (i.e., net extraordinary losses or income-decreasing extraordinary items), and that (2) Japanese firms selectively report extraordinary items (more extraordinary losses relative to extraordinary gains or vice versa) to increase or decrease earnings at ordinary income level, at their discretion. The evidence I present in this paper suggests that extraordinary items are not merely transitory items but rather possible earnings management tools. This evidence is consistent with the view that Japanese firms manage earnings upward to overstate ordinary income.

Earnings management decisions made by Japanese firms may appear unusual to people outside of Japan because of the institutional issue(1) that Japanese accounting standards are not globally recognized. A few studies examine how Japanese firms manage earnings. Darrough, Pourjalali and Saudagaran (1998) show that Japanese managers also make accounting accruals decisions to manage earnings. Mande, File and Kwak (2000) find that Japanese managers make decisions as myopic as those of their counterparts in the US in cutting R&D budgets to smooth income. Herrmann, Inoue and Thomas (2003) exploit a Japan-specific setting and argue that Japanese firms are able to manage earnings by selling fixed assets and marketable securities in order to reduce the management forecast errors. Higgins (2012) investigate if Japanese stock-for-stock merger acquirer manage earnings before argues merger announcement and present evidence showing that acquirer firms

(1) Nobes and Parker (2010) provide a condense introduction on the accounting institution in Japan from a harmonization perspective that discusses how Japanese accounting standards are different from the International Financial Reporting Standards or the IFRSs.

exhibit significant positive long-term abnormal accruals before the stock-swaps mergers.

In this paper, I present evidence and show that Japanese firms also manage earnings through sales of fixed assets and marketable securities, but in a rather different setting from Herrmann, Inoue and Thomas (2003). Herrmann, Inoue and Thomas (2003) show that Japanese firms have incentives to sell assets to mitigate management forecast errors at the net income level. In this paper, I argue and show that Japanese firms have incentives to overstate ordinary income (i.e., current income as referred to in Herrmann, Inoue and Thomas [2003]) by discretionary shifting the classification of the underlying assets with unrealized holding gains or losses from non-current assets to current assets or from current assets to non-current asset.

Japanese firms' incentives to manage earnings to overstate ordinary income stem from the "ordinary income first" business convention in Japan. Since the setting of the Japanese General Accepted Accounting Principles (GAAP) in 1949, accounting conventions in Japan have been strongly influenced by the "current operating performance concepts." Before the "all-inclusive concepts" were incorporated into the Japanese GAAP in 1974,[(2)] "ordinary income" (current income) had been the bottom line earnings in the statement of income (Appendix 1 illustrates the format of the statement of income of Nippon Steel Corporation prepared according to the Japanese GAAP).[(3)]

With the revision of the Japanese GAAP in 1974, the classification of extraordinary items was incorporated into the statements of income and

(2) The shift from the "current operating performance" statement of income to the "all-inclusive" statement of income was motivated by the US Accounting Principles Board Opinion No. 9, "Reporting the Results of Operations."

(3) There is no official guidance on how to translate financial statements prepared in Japanese into English. The statement of income prepared by Nippon Steel is the "convenience translation" as detailed in Nobes and Parker (2010). Note that the term "extraordinary items" referred to in Herrmann, Inoue and Thomas (2003), and in this paper, is the same as the "special items" in the statement of income prepared by Nippon Steel.

placed below the ordinary income. However, even though ordinary income has for some time now not been regarded as indicating bottom line earnings in the statements of income, business people in Japan still view ordinary income as the index of a firm's performance. With the overemphasis on ordinary income, strong incentives are created for Japanese firms to avoid reporting losses at the ordinary income level.

The Nikkei Financial News once argued that it is meaningless for business people to look at ordinary income as the index of a firm's performance because it is very easy to manage ordinary income upward by selling assets with unrealized holding gains (Nikkei Financial News, June 14, 1992).

The reason Japanese firms are able to manage earnings to overstate ordinary income is that the Japanese GAAP treat the unrealized holding gains and losses of securities and fixed assets differently according to their classification on balance sheets. When a firm sells marketable securities or fixed assets classified as current assets, the firm is required to report the unrealized holding gains or losses as non-operating gains or losses (items above ordinary income). On the other hand, when the firm sells non-marketable securities or fixed assets classified as non-current assets, the firm must report the unrealized holding gains or losses as extraordinary gains or losses (items below ordinary income).

Appendix 2 illustrates the mechanism by which a Japanese firm manages ordinary income upward by selling assets with unrealized holding gains. The firm first shifts the classification of the underlying assets from non-current assets to current assets. When the firm sells the underlying assets, it is able to report the unrealized holding gains as non-operating gains to increase ordinary income.

In contrast, Appendix 3 illustrates the mechanism for overstating ordinary income by selling assets with unrealized holding losses. The firm first shifts the classification of the underlying assets from current assets to non-current assets. Then the firm is able to report the unrealized holding losses as extraordinary losses instead of non-operating losses, to increase ordinary

income.

The classification shifting[4] described above can be archived by "persuading"[5] the auditing firms, and according to the Nikkei Financial News, more and more Japanese companies were actually trying to "persuade" their auditors (Nikkei Financial News, June 14, 1992).

Different from Herrmann, Inoue and Thomas (2003) that showed that Japanese firms have an incentive to manage earnings through sales of assets to reduce forecast management errors; in this paper, I argue that Japanese firms have an incentive to manage earnings, through classification shifting, to overstate core earnings (i.e., ordinary income or income before extraordinary items).

Our paper contributes to the literature by showing that Japanese firms manage earnings not only by selling assets but also by shifting classification of assets to overstate ordinary income. In addition, our paper also contributes to the literature by showing that, with the series of accounting reforms took place, both sale of assets and classification shifting might no longer be viable options for Japanese firms to manage earnings after fiscal 2000.[6]

2. Extraordinary Items in Japan Hypothesis Development

2.1 Definitions of Extraordinary Items in Japan

Extraordinary items in the Japanese GAAP[7] consist of two main components: (1) non-recurring items, and (2) prior period adjustments.[8] According

(4) McVay (2006) also presents evidences on shifting classification to overstate core earnings in respect of the US GAAP. However, the setting presented in McVay (2006) is very different to the setting presented in this paper.

(5) Since fiscal 2000, with the amended audit guidance in Japan, such "persuading" might not be tolerated by the regulatory authority.

(6) In Japan, when a specific accounting standard is taken into effective, the effective is usually set as the "fiscal year that begins from April 1st and ends in March 31st in the following year." Therefore, in this paper, the term "fiscal year" also refers to a fiscal year beings in April and ends in March in the following year unless otherwise specified.

(7) The underlying descriptions on extraordinary items in Japanese GAAP are based on the translation prepared by the Japanese Institute of Certified Public Accountants (JICPA 1987).

to the "Supplement 12 Extraordinary Items" of the Japanese GAAP, extraordinary items are as follows:[9]

(1) non-recurring items include,
  (a) gain or loss on sale of fixed assets,
  (b) gain or loss on sales of securities acquired for purposes other than resale,
  (c) casualty loss.
(2) prior period adjustments[10] include,
  (a) adjustment of reverses provided in prior periods,
  (b) adjustment of depreciation provided in prior periods,
  (c) correction of inventory valuation made in prior periods,
  (d) recovery of bad debts written off in prior periods in prior periods.

In addition, "extraordinary items of an immaterial amount or of a recurring nature[11] may be classified as ordinary item."[12]

The definition of extraordinary items in Japanese GAAP allows more room for interpretations compared to the US GAAP or IFRS (IFRS does not have a classification for extraordinary items). In practice, extraordinary items reported by Japanese firms usually include gains/losses on sales of long-term investments in properties, equipment, real estates, and other-than-trading

(8) Nobes and Parker (2010) interpret the "prior period adjustments" part as "material restatement resulting from corrections of error."

(9) Ever since the classification of extraordinary items first appeared in statement of income prepared according the Japanese GAAP in 1974, the contents have been same until the "Statement No. 24, Accounting Standard for Accounting Changes and Error Corrections" issued by Accounting Standard Board of Japan (ASBJ, the current private-sector accounting standard-setting body in Japan) to be effective in March 2012.

(10) "Prior period adjustments" will not be included in the classification of extraordinary items starting from March 2012 with the effective of "Statement No. 24, Accounting Standard for Accounting Changes and Error Corrections" issued by ASBJ in December 2009.

(11) For example, in stead of extraordinary items, Nippon Steel constantly classifies "loss on disposal of fixed assets" as "non-operating items" in their statement of income.

(12) The terms "ordinary items" in the JICPA (1978) translation on extraordinary items is the same with "non-operating items" referred in this paper.

securities, gains/losses from retirement benefits (since 2001), impairment expense (since 2004), and gains from negative goodwill (since 2010).[13]

Herrmann, Inoue and Thomas (2003) showed that before the Accounting Big Bang[14] took place in Japan in the early 2000s,[15] Japanese firms increased (decreased) earnings through the sale of fixed assets and marketable securities to mitigate forecast management errors in operating earnings. Fixed assets in Japan are recognized at historical cost less accumulated depreciation. The market-book value differences of fixed assets remain until the fixed assets are sold. Marketable securities are recorded at lower of cost or market.[16] Hence, as the market value of an individual fixed asset or marketable security deviates from its book value, it creates unrealized holding gains or losses. Thus, Japanese firms are able to time the market by selecting fixed assets or marketable securities with unrealized holding gains or losses. When the current period performance is expected to be bad, the firm can report unrealized holding gains to increase earnings and save the unrealized holding losses on the books. On the other hand, when the current period is better than expected, the firm can recognize unrealized holding losses to decrease earnings and keep the unrealized holding gains as reserves for future losses.

However, with the new accounting standards introduced into the Japanese GAAP in the Accounting Big Bang, Japanese firms have been forced to change their earnings management schemes. Among the new accounting standards, market-to-market accounting and impairment for fixed assets have a significant impact on the amount of extraordinary items reported. With these two new standards, the reported amounts of unrealized

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(13) Herrmann, Inoue and Thomas (2000) document that 93% of Japanese firms report extraordinary items while only 20% of US firm report extraordinary items in their sample during 1984 to 1995. The US figure for reporting extraordinary items dropped to 2% in 2003 (Accounting Trends and Techniques, 60th edition, AICPA, 2006).

(14) Accounting Big Bang refers to a series of accounting standard reforms took place in late 1990s in Japan. See appendix 4 for amended accounting standards.

(15) The data period in Herrmann, Inoue and Thomas (2003) only covers 1992 to 1997.

(16) Lower of cost or market was option, and was not made mandatory until 2008.

holding gains from fixed assets and unrealized holding gains or losses securities will be restricted. In other words, since 2000, we may see that earnings management through classification shifting as well as sale of fixed assets or securities may have declined.

2.2 Main Hypothesis

Under the current Japanese GAAP, extraordinary items are presented as *after ordinary income* and *before pretax income* items in the statement of income. The following are the main hypotheses of this study.

Formal Hypothesis for Extraordinary Items: If the firm shifts classification to overstate ordinary income, ordinary income and net extraordinary items are expected to be negatively correlated (i.e., net extraordinary items are income-decreasing).

Formal Hypothesis for Extraordinary Gains: If the firm shifts classification to overstate ordinary income, ordinary income and extraordinary gains are expected to be negatively correlated.

Formal Hypothesis for Extraordinary Losses: If the firm shifts classification to overstate ordinary income, ordinary income and extraordinary losses are expected to be positively correlated.

3. Research Design

We construct the following naïve models to test the hypotheses:

$$OrdinaryIncome_{i,t} = \alpha_1 + \alpha_2 * NetExtraItems_{i,t} + \varepsilon_{i,t}, \quad (1)$$

$$OrdinaryIncome_{i,t} = \beta_1 + \beta_2 * ExtraGains_{i,t} + \beta_3 * ExtraLosses_{i,t} + \varepsilon_{i,t}, \quad (2)$$

where

$OrdinaryIncome_{i,t}$ = ordinary income,
$NetExtraItems_{i,t}$ = sum of extraordinary items (i.e., extraordinary gains minus extraordinary losses),
$ExtraGains_{i,t}$ = extraordinary gains, and
$ExtraLosses_{i,t}$ = extraordinary losses.

I scale all variables by total assets. I am aware that many previous studies in the existing literature suggest that lagged total assets should be used as the scaling factor. Therefore, I conduct analyses using both beginning-of-year total assets and end-of-year total assets as the scaling factor, and the results I obtain are qualitatively the same.

4. Sample and Data

4.1 Sample Selections

I obtain financial data on Japanese firms from the Nikkei Economic Electronic Databank System—FinancialQUEST online database service. All firms in the sample are listed in the first and second section of the Tokyo Securities Exchange. The data period covers fiscal 1979 to fiscal 2007, in accordance with the availability of the data.(17) The final sample includes a total of 49,901 firm-years.(18)

I use the two-digit Nikkei medium industry classification codes to identify a firm's industry affiliation. I exclude firms in regulated industries (e.g., utilities), banks and other financial institutions from the sample. The final sample contains firms from 33 industries.

(17) The classification of extraordinary items was first required by the Japanese commercial code, as amended in 1963. However, the classification of extraordinary items did not appear in statements of income prepared according to the Japanese GAAP until the GAAP amendment in 1974.

(18) In additional tests, I delete firm-years at upper 98% and lower 2% of the sample based on ordinary income. I obtain qualitatively similar results with this truncated sample. I shall detail this in later sections.

4.2 Descriptive Statistics

Table 1 reports the numbers of profit- and loss-reporting firms at ordinary income and pretax income levels. As reported in Table 1, there are more observations of loss-reporting firms at the pretax income level. This suggests that (1) most Japanese firms are profitable at ordinary income level and (2) a firm can become loss-making firm by reporting substantially amount of extraordinary losses. This table also reveals a tread in an increased num-

Table 1 Profit Firms versus Loss Firms

Year	N	Ord>0	Ord<0	Loss/Pro	Pre>0	Pre<0	Loss/Pro
1979	723	658	65	9.86%	665	58	8.71%
1980	1295	1229	66	5.29%	1234	61	4.94%
1981	1341	1278	63	4.93%	1292	49	3.79%
1982	1371	1264	107	8.47%	1282	89	6.94%
1983	1401	1266	135	10.66%	1286	115	8.94%
1984	1490	1289	133	10.32%	1312	110	8.31%
1985	1385	1368	85	6.21%	1386	67	4.83%
1986	1495	1402	93	6.63%	1423	72	5.06%
1987	1569	1424	145	10.18%	1447	122	8.43%
1988	1657	1560	97	6.22%	1582	75	4.74%
1989	1698	1663	35	2.10%	1668	30	1.80%
1990	1692	1655	37	2.24%	1662	30	1.81%
1991	1694	1641	53	3.23%	1649	45	2.73%
1992	1718	1622	96	5.92%	1623	95	5.85%
1993	1731	1534	197	12.84%	1527	204	13.36%
1994	1751	1481	270	18.23%	1470	281	19.05%
1995	1814	1602	212	13.23%	1583	231	14.53%
1996	1851	1692	159	9.34%	1674	177	10.51%
1997	1890	1770	120	6.72%	1749	141	8.00%
1998	1919	1755	164	9.34%	1686	233	13.82%
1999	1940	1641	299	18.22%	1521	419	27.55%
2000	1975	1784	191	10.59%	1601	374	23.24%
2001	2000	1865	135	7.24%	1577	423	26.76%
2002	2026	1743	283	16.06%	1471	555	37.66%
2003	2054	1858	196	10.44%	1657	397	23.84%
2004	2074	1959	115	5.87%	1879	195	10.38%
2005	2095	2000	95	4.75%	1915	180	9.40%
2006	2113	2006	107	5.33%	1905	208	10.92%
2007	2139	2011	128	6.36%	1976	163	8.25%
	49901	46020	3881		44702	5199	

ber of loss-making firms after extraordinary items since early 1990s and the trend is consistent with the underlying economic situation in Japan.

Table 2 and Table 3 show yearly statistics on extraordinary items deflated by ordinary items and extraordinary items deflated by assets, respectively. Each table reports the mean, median and standard deviation of the variables. Table 2 reveals that the reported amount of extraordinary items can materially increase or decrease ordinary income even when the

Table 2 Extraordinary Items over Ordinary Income by Year

	Extraordinary Gains / Ordinary Income			Extraordinary Losses / Ordinary Income			Net Extraordinary Items / Ordinary Income		
	Mean	Median	STDEV	Mean	Median	STDEV	Mean	Median	STDEV
1979	0.2316	0.0251	2.9580	0.3373	0.0557	2.5341	−0.1057	−0.0168	2.3014
1980	0.3412	0.0188	5.5971	0.3548	0.0583	5.4893	−0.0136	−0.0152	1.2487
1981	0.2931	0.0199	2.3092	0.2820	0.0445	1.8199	0.0111	−0.0073	0.8298
1982	2.1214	0.0176	50.6934	1.9085	0.0404	44.5782	0.2129	−0.0083	6.4122
1983	1.1769	0.0187	25.4635	0.9619	0.0410	20.6139	0.2150	−0.0060	7.5395
1984	0.4213	0.0223	6.9746	0.3656	0.0355	5.7841	0.0556	−0.0003	3.8379
1985	0.3064	0.0164	4.0136	0.1679	0.0357	1.6091	0.1384	−0.0032	3.3939
1986	0.9069	0.0276	24.2173	0.9832	0.0394	32.1864	−0.0763	0.0000	8.7508
1987	0.1288	0.0185	1.9566	0.1188	0.0391	1.9095	0.0100	−0.0048	1.3385
1988	0.1278	0.0132	2.7238	0.1987	0.0441	2.7776	−0.0710	−0.0078	1.9002
1989	0.1262	0.0104	3.9710	0.0885	0.0393	2.6104	0.0377	−0.0109	1.6558
1990	0.1672	0.0108	2.2238	0.1208	0.0357	1.2111	0.0464	−0.0073	1.4368
1991	0.2237	0.0094	3.8811	0.2296	0.0437	2.1234	−0.0059	−0.0102	2.6789
1992	0.0842	0.0129	11.5390	−0.1419	0.0593	17.4521	0.2261	−0.0143	7.6192
1993	0.1760	0.0076	3.6326	0.2435	0.0471	2.2173	−0.0674	−0.0181	2.2851
1994	0.4937	0.0068	9.7748	0.7010	0.0405	10.9324	−0.2072	−0.0188	3.7941
1995	7.0862	0.0069	297.8100	2.0363	0.0644	67.9147	5.0499	−0.0308	230.2206
1996	0.1999	0.0087	3.4226	0.3430	0.0551	4.2756	−0.1432	−0.0202	3.3980
1997	0.0987	0.0080	2.0443	0.0435	0.0694	7.4799	0.0553	−0.0312	7.4744
1998	0.3327	0.0068	3.6987	0.4856	0.1116	3.4490	−0.1528	−0.0586	2.9023
1999	−0.0427	0.0100	10.7273	0.1937	0.0966	26.1483	−0.2364	−0.0504	19.0420
2000	0.2182	0.0201	5.8060	0.8502	0.1882	15.2788	−0.6320	−0.0992	12.8518
2001	1.2929	0.0330	20.1836	1.9853	0.3070	34.6115	−0.6924	−0.1750	25.2860
2002	0.3648	0.0191	10.1440	1.9026	0.2660	31.4767	−1.5378	−0.1647	24.6652
2003	−0.5853	0.0246	33.5943	0.5863	0.2476	28.9584	−1.1716	−0.1352	33.7564
2004	0.3579	0.0384	4.5302	0.4171	0.1385	5.4945	−0.0592	−0.0445	4.2058
2005	0.3546	0.0324	3.7683	0.7943	0.1170	9.4005	−0.4398	−0.0426	7.1361
2006	0.3028	0.0360	2.7546	0.3483	0.0982	5.5537	−0.0456	−0.0250	5.1449
2007	0.5115	0.0290	7.5102	0.5661	0.0683	9.9439	−0.0545	−0.0143	6.6849

Table 3 Extraordinary Items over Total Assets by Year

	Extraordinary Gains / Total Assets			Extraordinary Losses / Total Assets			Net Extraordinary Items / Total Assets		
	Mean	Median	STDEV	Mean	Median	STDEV	Mean	Median	STDEV
1979	0.0086	0.0019	0.0237	0.0095	0.0033	0.0227	−0.0009	−0.0006	0.0144
1980	0.0078	0.0015	0.0278	0.0090	0.0036	0.0204	−0.0012	−0.0008	0.0220
1981	0.0067	0.0015	0.0186	0.0073	0.0029	0.0149	−0.0005	−0.0004	0.0132
1982	0.0077	0.0015	0.0255	0.0084	0.0028	0.0238	−0.0007	−0.0003	0.0162
1983	0.0098	0.0018	0.0378	0.0086	0.0027	0.0255	0.0013	−0.0001	0.0257
1984	0.0080	0.0018	0.0301	0.0068	0.0023	0.0238	0.0012	0.0000	0.0152
1985	0.0084	0.0013	0.0357	0.0062	0.0023	0.0160	0.0022	−0.0001	0.0279
1986	0.0085	0.0019	0.0310	0.0063	0.0024	0.0175	0.0022	0.0000	0.0260
1987	0.0085	0.0015	0.0292	0.0079	0.0024	0.0235	0.0007	−0.0001	0.0201
1988	0.0082	0.0010	0.0292	0.0072	0.0026	0.0210	0.0010	−0.0003	0.0199
1989	0.0059	0.0007	0.0263	0.0060	0.0022	0.0185	−0.0001	−0.0006	0.0166
1990	0.0051	0.0008	0.0175	0.0049	0.0022	0.0118	0.0001	−0.0004	0.0144
1991	0.0061	0.0006	0.0237	0.0069	0.0022	0.0353	−0.0008	−0.0005	0.0330
1992	0.0073	0.0009	0.0282	0.0088	0.0030	0.0272	−0.0015	−0.0007	0.0251
1993	0.0052	0.0006	0.0237	0.0068	0.0026	0.0184	−0.0015	−0.0008	0.0206
1994	0.0060	0.0008	0.0241	0.0073	0.0028	0.0210	−0.0014	−0.0008	0.0162
1995	0.0061	0.0007	0.0227	0.0087	0.0033	0.0245	−0.0026	−0.0013	0.0213
1996	0.0053	0.0006	0.0349	0.0079	0.0028	0.0278	−0.0026	−0.0011	0.0425
1997	0.0046	0.0005	0.0207	0.0080	0.0035	0.0212	−0.0034	−0.0014	0.0159
1998	0.0047	0.0006	0.0150	0.0117	0.0055	0.0248	−0.0070	−0.0028	0.0249
1999	0.0067	0.0010	0.0302	0.0165	0.0069	0.0457	−0.0098	−0.0034	0.0378
2000	0.0084	0.0015	0.0331	0.0234	0.0103	0.0583	−0.0150	−0.0052	0.0511
2001	0.0122	0.0020	0.0396	0.0323	0.0162	0.0588	−0.0201	−0.0091	0.0547
2002	0.0111	0.0014	0.2095	0.0277	0.0144	0.0498	−0.0165	−0.0094	0.2028
2003	0.0101	0.0015	0.0414	0.0246	0.0132	0.0594	−0.0145	−0.0076	0.0462
2004	0.0099	0.0023	0.0414	0.0172	0.0071	0.0508	−0.0073	−0.0026	0.0481
2005	0.0091	0.0020	0.0310	0.0177	0.0068	0.0476	−0.0086	−0.0028	0.0461
2006	0.0101	0.0026	0.0348	0.0185	0.0065	0.0522	−0.0084	−0.0019	0.0483
2007	0.0109	0.0021	0.1114	0.0160	0.0049	0.1088	−0.0051	−0.0011	0.0505

amount of extraordinary items is less than 1% of total assets in most reported yearly statistics. I also deflated extraordinary items on sales; the untabulated results show that the amount of extraordinary items is less than 1% of sales volumes before fiscal 1998, and 2.58%, at the most, from fiscal 1998 to fiscal 2007.

Table 4 presents correlation coefficients (Pearson product-moment correlation coefficients / Spearman's rank correlation coefficients) between

Table 4 Correlation Matrix

Spearman / Pearson	Extraordinary Gains	Extraordinary Losses	Extraordinary Items	Ordinary Income
Extraordinary Gains	1	0.463 (.000)	0.239 (.000)	−0.212 (.000)
Extraordinary Losses	0.450 (.000)	1	−0.606 (.000)	−0.105 (.000)
Extraordinary Items	0.697 (.000)	−0.326 (.000)	1	−0.083 (.000)
Ordinary Income	−0.207 (.000)	−0.148 (.000)	−0.100 (.000)	1

This table reports Pearson product moment correlation coefficients at the lower lever of the table and Spearman's rank correlation coefficients at the upper level of the table. Correlation coefficients are reported at the upper level of each cell and each corresponding p-value is reported in the parentheses. Variables significant at less than 1% significant level are marked in bold.

variables. Note that extraordinary items and ordinary income are negatively correlated (–0.100, –0.083). Extraordinary gains and ordinary income are negatively correlated (–0.207, –0.212). On the other hand, extraordinary losses and ordinary income are negatively correlated (–0.148, –0.105). Finally, extraordinary gains and extraordinary losses are positively correlated (0.450, 0.463).

5. Empirical Results

5.1 Regression Results of Extraordinary Items by Decades

Table 5 reports the result of estimation regression (1). Regression is estimated with ordinary income as the dependent variable and extraordinary items as the independent variable. I estimate regression (1) using five different methods. The descriptions of the treatments are detailed in the note of each table and panel.

Table 5, Panel A, reports the estimation results of the full sample period, 1979–2007. The coefficients of *NetExtraItems* are around –0.12. A straightforward interpretation of this result is that from fiscal 1979 to fiscal 2007, extraordinary items recognized by Japanese firms decreased by an average of 12% the ordinary income of firms in the sample.

Table 5, Panel B, reports the estimation results from fiscal 1979 to fiscal 1989. The coefficients of *NetExtraItems* are between –0.44 and 0.46.

Table 5 Estimation Regression of Ordinary Income on Net Extraordinary Items by Decades

$$OrdinaryIncome_{i,t} = \alpha_1 + \alpha_2 * NetExtraItems_{i,t} + \varepsilon_{i,t}$$

Panel A: Data period: 1979-2007

	(1)	(2)	(3)	(4)	(5)
Intercept	***0.050340	***0.054766	***0.0522723	***0.06046	***0.050341
	(13.01)	(44.69)	(22.31)	(23.64)	(175.53)
NetExtraItems	**−0.121248	***−0.113674	***−0.1271612	***−0.1222	***−0.121253
	(−2.34)	(−21.79)	(−23.72)	(−23.56)	(−22.40)
#Obv.	49901	49901	49901	49901	49901
F-stat (p-value)	508.1 (0.00)	114.7 (0.00)	53.3 (0.00)	85.24 (0.00)	
Adj. R-squared	0.01006	0.06994	0.0295	0.09336	

*, **, and *** indicate variable significant at 10%, 5%, and 1% level respectively. The sample includes 33 industries over 1979 to 2007 March-fiscal-end-years. The t-statistics reported in the parenthesis are calculated from (1) standard error clustered at industry, (2) fixed effect estimation with standard error fixed at industry, (3) fixed effect estimation with standard error fixed at year, and (4) fixed effect estimation with standard error fixed at industry and year. Regression (5) is estimated by Markov Chain Monte Carlo for Gaussian Linear Regression with Gaussian errors using Gibbs sampling.

Panel B: Data period: 1979-1989

	(1)	(2)	(3)	(4)	(5)
Intercept	***0.0572717	***0.068488	***0.051970	***0.0651836	***0.057272
	(16.73)	(37.39)	(25.16)	(24.49)	(127.27)
NetExtraItems	***−0.4610398	***−0.451117	***−0.456117	***−0.4448624	***−0.461074
	(−7.09)	(−21.64)	(−20.95)	(−21.39)	(−20.97)
#Obv.	15425	15425	15425	15425	15425
F-stat (p-value)	446.8 (0.00)	63.17 (0.00)	51.01 (0.00)	51.96 (0.00)	
Adj. R-squared	0.02809	0.1174	0.03444	0.1244	

*, **, and *** indicate variable significant at 10%, 5%, and 1% level respectively. The sample includes 33 industries over 1979 to 2007 March-fiscal-end-years. The t-statistics reported in the parenthesis are calculated from (1) standard error clustered at industry, (2) fixed effect estimation with standard error fixed at industry, (3) fixed effect estimation with standard error fixed at year, and (4) fixed effect estimation with standard error fixed at industry and year. Regression (5) is estimated by Markov Chain Monte Carlo for Gaussian Linear Regression with Gaussian errors using Gibbs sampling.

Extraordinary items recognized by Japanese firms decreased their ordinary income by an average of 44% to 46%. In the late 1980s, Japan was in a booming bubble economy. This implies that Japanese firms were profitable enough to recognize more losses through extraordinary items during the bubble

Panel C: Data period: 1990-1999

	(1)	(2)	(3)	(4)	(5)
Intercept	***0.0434538	***0.048819	***0.059615	***0.065669	***0.043454
	(11.42)	(22.33)	(36.43)	(24.87)	(85.20)
NetExtraItems	**−0.1522583	***−0.111044	***−0.164889	***−0.125396	***−0.152287
	(−1.99)	(−6.09)	(−8.85)	(−6.89)	(−8.12)
#Obv.	18000	18000	18000	18000	18000
F-stat (p-value)	66.68 (0.00)	33.04 (0.00)	32.94 (0.00)	33.53 (0.00)	
Adj. R-squared	0.003636	0.05549	0.01744	0.07055	

*, **, and *** indicate variable significant at 10%, 5%, and 1% level respectively. The sample includes 33 industries over 1979 to 2007 March-fiscal-end-years. The t-statistics reported in the parenthesis are calculated from (1) standard error clustered at industry, (2) fixed effect estimation with standard error fixed at industry, (3) fixed effect estimation with standard error fixed at year, and (4) fixed effect estimation with standard error fixed at industry and year. Regression (5) is estimated by Markov Chain Monte Carlo for Gaussian Linear Regression with Gaussian errors using Gibbs sampling.

Panel D: Data period: 2000-2007

	(1)	(2)	(3)	(4)	(5)
Intercept	***0.0516814	***0.0476628	***0.046018	***0.0420464	***0.05168
	(8.84)	(21.51)	(31.75)	(16.49)	(101.27)
NetExtraItems	−0.1010804	***−0.0999157	***−0.104926	***−0.1039059	***−0.10109
	(−1.31)	(−17.60)	(−17.76)	(−18.42)	(−16.93)
#Obv.	16476	16476	16476	16476	16476
F-stat (p-value)	289.9 (0.00)	57.96 (0.00)	65.85 (0.00)	55.39 (0.00)	
Adj. R-squared	0.01723	0.1024	0.03053	0.1166	

*, **, and *** indicate variable significant at 10%, 5%, and 1% level respectively. The sample includes 33 industries over 1979 to 2007 March-fiscal-end-years. The t-statistics reported in the parenthesis are calculated from (1) standard error clustered at industry, (2) fixed effect estimation with standard error fixed at industry, (3) fixed effect estimation with standard error fixed at year, and (4) fixed effect estimation with standard error fixed at industry and year. Regression (5) is estimated by Markov Chain Monte Carlo for Gaussian Linear Regression with Gaussian errors using Gibbs sampling.

economy.

Table 5, Panel C, reports the estimation results from fiscal 1990 to fiscal 1999. The coefficients of *NetExtraItems* are between –0.11 and 0.16. Extraordinary items recognized by Japanese firms decreased their ordinary income by an average of 11% to 16%.

Table 5, Panel D, reports the estimation results from fiscal 2000 to fiscal 2007. The coefficients of *NetExtraItems* are between –0.099 and –0.104. Extraordinary items recognized by Japanese firms decreased their ordinary

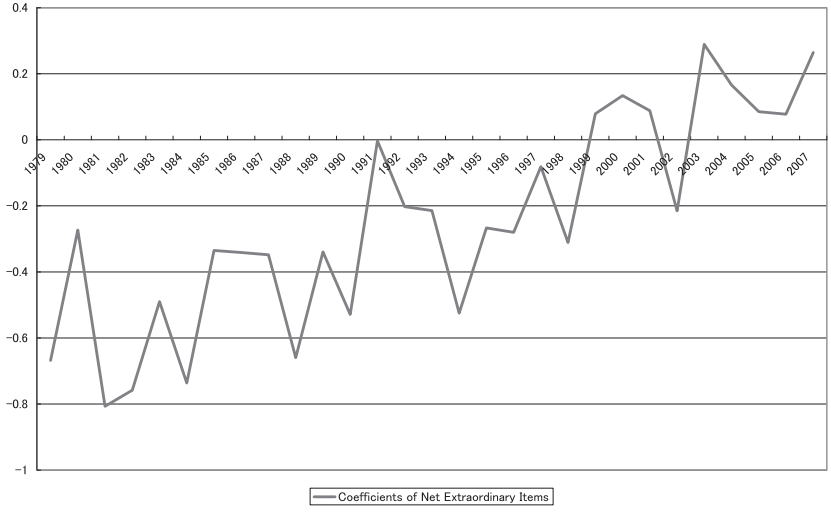
income by an average of 9.9% to 10.4%.

5.2 Time Series Figures of Regression Results of Extraordinary Items

Time series regression coefficients are plotted in Figure 1 (regression results are not tabulated). From fiscal 1979 to fiscal 1998, the coefficients of *NetExtraItems* are all negative. This is consistent with that fact that in this period Japanese firms were profitable enough to recognize large amounts of unrealized losses through extraordinary items. Figure 1 shows a clear trend that, before fiscal 1999, extraordinary items recognized by Japanese firms are income-decreasing, and they have been income-increasing ever since (except for fiscal 2002).

From fiscal 1999 to fiscal 2007, all coefficients of *NetExtraItems* are positive, except for the fiscal 2002 coefficient. In fiscal 2002, mark-to-market accounting forced Japanese firms to report the unrealized holding gains and losses of both marketable and available-for-sale securities. If a firm has securi-

Figure 1 Time Series Coefficients of Net Extraordinary Items



$$OrdinaryIncome_{i,t} = \alpha_1 + \alpha_2 * NetExtraItems_{i,t} + \varepsilon_{i,t}$$

ties with unrealized holding losses, it will be forced to report valuation losses, and the valuation losses are classified as extraordinary items. In sum, the results are roughly consistent with the underlying economic environment in Japan.

5.3 Regression Results of Extraordinary Gains and Extraordinary Losses by Decade

Table 6 reports the estimation results of regression (2). Table 16, Panel A, reports the estimation results of the full sample period from fiscal 1979 to fiscal 2007. The coefficients for *ExtraGains* and *ExtraLosses* are –0.20 and –0.10, respectively. A straightforward interpretation of this result is that during fiscal 1979 to fiscal 2007, when a firm reports lower than expected ordinary income, it recognizes extraordinary gains to increase earnings. On the other hand, ordinary income is also negatively correlated to *ExtraLosses*. This means that when a firm reports a higher than expected ordinary income, it recognizes extraordinary losses to decrease earnings.

The results are consistent with the working hypotheses of the paper and with the previous literature: namely, Japanese firms manage earnings through sales of assets with unrealized gains or losses.

Table 6, Panel B, reports the estimation results from fiscal 1979 to fiscal 1989. The coefficients for *ExtraGains* and *ExtraLosses* are around –0.46 and 0.21, respectively. This result indicates that Japanese firms recognized more extraordinary losses than extraordinary gains during fiscal 1979 to fiscal 1989. This is consistent with the underlying economic environment, in that Japanese firms were profitable enough to recognize more losses than gains through extraordinary items during the bubble economy.

Table 6, Panel C, reports the estimation results from fiscal 1990 to fiscal 1999. The coefficients for *ExtraGains* vary from –0.34 to –0.39. On the other hand, the coefficients of *ExtraLosses* vary from –0.04 to –0.007. Note that the only coefficient that is statistically significant is estimated with a fixed-effect model by year. This is also consistent with the underlying economic environ-

Table 6 Estimation Regression of Ordinary Income on Extraordinary Gains and Extraordinary Losses

$$OrdinaryIncome_{i,t} = \beta_1 + \beta_2 * ExtraGains_{i,t} + \beta_3 * ExtraLosses_{i,t} + \varepsilon_{i,t}$$

Panel A: Data period: 1979-2007

	(1)	(2)	(3)	(4)	(5)
Intercept	***0.0538300	***0.058504	***0.0551157	***0.06358	***0.053831
	(13.85)	(48.62)	(23.97)	(25.36)	(184.86)
ExtraGains	***−0.2005911	***−0.194183	***−0.2031934	***−0.1983	***−0.200648
	(−17.21)	(−35.92)	(−36.68)	(−37.08)	(−36.22)
ExtraLosses	***−0.1028361	***−0.114397	***−0.1023547	***−0.1082	***−0.102820
	(−4.98)	(−16.02)	(−13.80)	(−15.09)	(−13.71)
#Obv.	49901	49901	49901	49901	49901
F-stat (p-value)	1215 (0.00)	177.6 (0.00)	117.7 (0.00)	120.8 (0.00)	
Adj. R-squared	0.0464	0.1074	0.06554	0.1295	

*, **, and *** indicate variable significant at 10%, 5%, and 1% level respectively. The sample includes 33 industries over 1979 to 2007 March-fiscal-end-years. The t-statistics reported in the parenthesis are calculated from (1) standard error clustered at industry, (2) fixed effect estimation with standard error fixed at industry, (3) fixed effect estimation with standard error fixed at year, and (4) fixed effect estimation with standard error fixed at industry and year. Regression (5) is estimated by Markov Chain Monte Carlo for Gaussian Linear Regression with Gaussian errors using Gibbs sampling.

Panel B: Data period: 1979-1989

	(1)	(2)	(3)	(4)	(5)
Intercept	***0.0591103	***0.0708004	***0.054313	***0.0680229	***0.05911
	(16.72)	(38.62)	(26.27)	(25.57)	(124.78)
ExtraGains	***−0.4606904	***−0.4507742	***−0.455353	***−0.4441008	***−0.46088
	(−7.05)	(−21.72)	(−21.00)	(−21.45)	(−21.37)
ExtraLosses	***0.2127270	***0.2031244	***0.209668	***0.1973497	***0.21286
	(2.80)	(6.94)	(6.88)	(6.76)	(6.92)
#Obv.	15425	15425	15425	15425	15425
F-stat (p-value)	292.4 (0.00)	66.13 (0.00)	58.18 (0.00)	54.54 (0,00)	
Adj. R-squared	0.03641	0.1256	0.04259	0.1325	

*, **, and *** indicate variable significant at 10%, 5%, and 1% level respectively. The sample includes 33 industries over 1979 to 2007 March-fiscal-end-years. The t-statistics reported in the parenthesis are calculated from (1) standard error clustered at industry, (2) fixed effect estimation with standard error fixed at industry, (3) fixed effect estimation with standard error fixed at year, and (4) fixed effect estimation with standard error fixed at industry and year. Regression (5) is estimated by Markov Chain Monte Carlo for Gaussian Linear Regression with Gaussian errors using Gibbs sampling.

ment in Japan in the 1990s.

Table 6, Panel D, reports the estimation results from fiscal 2000 to fiscal

Panel C: Data period: 1990-1999

	(1)	(2)	(3)	(4)	(5)
Intercept	***0.046244	***0.051707	***0.061592	***0.067767	***0.046246
	(12.53)	(23.78)	(37.87)	(25.84)	(87.77)
ExtraGains	***−0.393323	***−0.342144	***−0.399847	***−0.349716	***−0.393536
	(−7.21)	(−15.24)	(−17.55)	(−15.67)	(−17.30)
ExtraLosses	−0.0073350	**−0.040394	0.006060	−0.024684	−0.007247
	(−0.12)	(−2.01)	(0.30)	(−1.23)	(−0.35)
#Obv.	18000	18000	18000	18000	18000
F-stat (p-value)	193.1 (0.00)	41.48 (0.00)	58.66 (0.00)	40.08 (0.00)	
Adj. R-squared	0.0209	0.07104	0.03404	0.08539	

*, **, and *** indicate variable significant at 10%, 5%, and 1% level respectively. The sample includes 33 industries over 1979 to 2007 March-fiscal-end-years. The t-statistics reported in the parenthesis are calculated from (1) standard error clustered at industry, (2) fixed effect estimation with standard error fixed at industry, (3) fixed effect estimation with standard error fixed at year, and (4) fixed effect estimation with standard error fixed at industry and year. Regression (5) is estimated by Markov Chain Monte Carlo for Gaussian Linear Regression with Gaussian errors using Gibbs sampling.

Panel D: Data period: 2000-2007

	(1)	(2)	(3)	(4)	(5)
Intercept	***0.0576685	***0.0534550	***0.052114	***0.0478879	***0.057670
	(10.07)	(25.26)	(37.32)	(19.65)	(113.15)
ExtraGains	***−0.1713170	***−0.1694209	***−0.173260	***−0.1715045	***−0.171364
	(−9.42)	(−29.86)	(−29.24)	(−30.42)	(−29.01)
ExtraLosses	***−0.1377750	***−0.1380728	***−0.131336	***−0.1313178	***−0.137765
	(−3.86)	(−17.34)	(−15.78)	(−16.54)	(−16.24)
#Obv.	16476	16476	16476	16476	16476
F-stat (p-value)	923.6 (0.00)	110.8 (0.00)	230.1 (0.00)	99.01 (0.00)	
Adj. R-squared	0.1007	0.1847	0.1112	0.1961	

*, **, and *** indicate variable significant at 10%, 5%, and 1% level respectively. The sample includes 33 industries over 1979 to 2007 March-fiscal-end-years. The t-statistics reported in the parenthesis are calculated from (1) standard error clustered at industry, (2) fixed effect estimation with standard error fixed at industry, (3) fixed effect estimation with standard error fixed at year, and (4) fixed effect estimation with standard error fixed at industry and year. Regression (5) is estimated by Markov Chain Monte Carlo for Gaussian Linear Regression with Gaussian errors using Gibbs sampling.

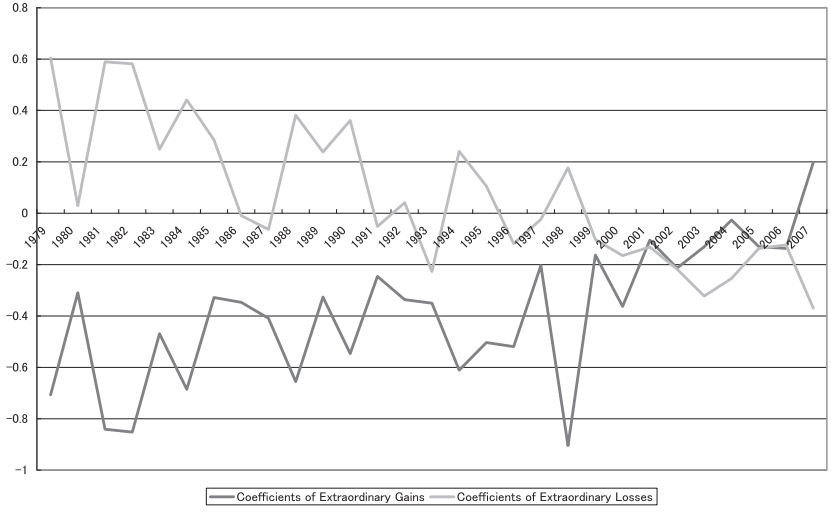
2007. The coefficients of *ExtraGains* and *ExtraLosses* are around –0.17 and –0.13, respectively. Note that the means of the reported adjusted r-squared measures are the highest among the periods discussed.

5.4 Time Series Figures of Extraordinary Gains and Extraordinary Losses

Figure 2 plots time series coefficients for *ExtraGains* and *ExtraLosses* (year by year regression results are untabulated). From fiscal 1979 to fiscal 2007, the coefficients of *ExtraGains* are all negative except for fiscal 2007. In contrast, from fiscal 1979 to fiscal 1985, all coefficients of *ExtraLosses* are positive, consistent with the results reported in Table 5 and Table 6. In the fiscal 1988 to fiscal 1998 period, the coefficients of *ExtraLosses* are also positive. The results are consistent with the underlying economic environment in Japan at that time. However, since fiscal 1993, more negative coefficients of *ExtraLosses* are reported. The only positive and statistically significant coefficient of *ExtraLosses* is reported in fiscal 1998.

Figure 2 shows a clear trend that the coefficients of *ExtraGains* and *ExtraLosses* move symmetrically. When the coefficient of *ExtraGains* moves toward zero, the coefficient of *ExtraLosses* reported in the same fiscal year also moves toward zero. On the other hand, when the coefficient of

Figure 2 Time Series Coefficients of Extraordinary Gains and Losses



$$OrdinaryIncome_{i,t} = \beta_1 + \beta_2 * ExtraGains_{i,t} + \beta_3 * ExtraLosses_{i,t} + \varepsilon_{i,t}$$

ExtraGains moves away from zero, the coefficient of *ExtraLosses* also moves away.

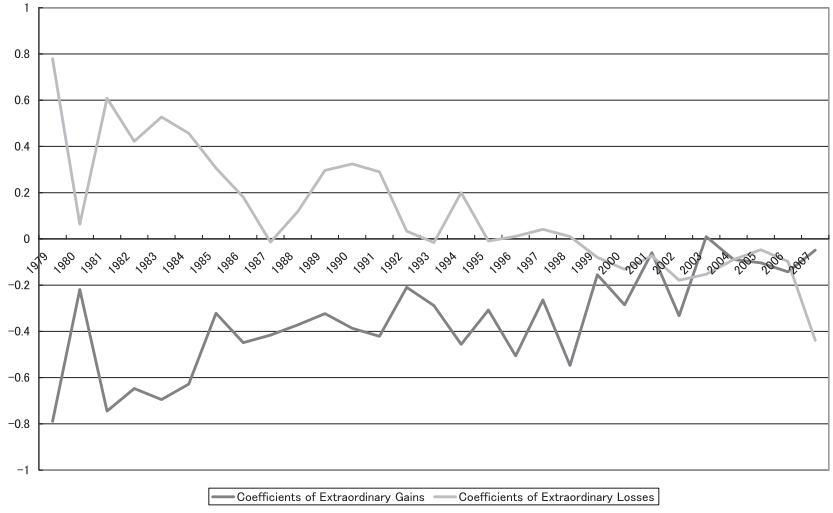
Figure 2 reveals that Japanese firms might recognize, at their discretion, the amount of extraordinary gains and extraordinary losses to determine the net amount of extraordinary items a firm is going to report in the current fiscal year.

5.5 Analysis with Truncated Sample

I also replicate all analyses conducted in this section with a truncated sample. I delete firm-years at upper 98% and lower 2% of the sample based on ordinary income. The results I obtain with this truncated sample are qualitatively the same (regression results untabulated).

Figure 3 presents the annual coefficients of *ExtraGains* and *ExtraLosses* in a time series fashion. Figure 3 also shows a trend that the coefficients of

Figure 3 Time Series Coefficients of Extraordinary Gains and Losses – Truncated Sample



$$OrdinaryIncome_{i,t} = \beta_1 + \beta_2 * ExtraGains_{i,t} + \beta_3 * ExtraLosses_{i,t} + \varepsilon_{i,t}$$

ExtraGains and *ExtraLosses* move symmetrically. That is, when the coefficient of *ExtraGains* moves toward to zero, the coefficient of *ExtraLosses* reported in the same fiscal year also moves toward zero. On the other hand, when the coefficient of *ExtraGains* moves away from zero, the coefficient of *ExtraLosses* also moves away.

Figure 3 also reveals that Japanese firms might recognize, at their discretion, the amount of extraordinary gains and extraordinary losses to determine the net amount of extraordinary items a firm is going to report in the current fiscal year.

6. Additional Tests

The previous section reports the results of the naïve models. In this section, I conduct tests with additional control variables to check the robustness of our results. In the additional tests, as in most previous studies that investigate Japanese firms, I restrict our sample to end-March-fiscal firms. I also use lagged total assets to replace current total assets as the scaling factor.

To test the robustness of the results, I use the following three models controlling for sales, change of sales, cost of goods sold (COGS) and selling, general and administrative expenses (SG&A):

$$OrdinaryIncome_{i,t} = \beta_1 + \beta_2 * ExtraGains_{i,t} + \beta_3 * ExtraLosses_{i,t} + \beta_4 * Sales_{i,t} + \beta_5 * \Delta Sales_{i,t} + \varepsilon_{i,t} \quad , \tag{3}$$

$$OrdinaryIncome_{i,t} = \beta_1 + \beta_2 * ExtraGains_{i,t} + \beta_3 * ExtraLosses_{i,t} + \beta_4 * Sales_{i,t} + \beta_5 * \Delta Sales_{i,t} + \beta_6 * DebtEquity_{i,t} + \varepsilon_{i,t} \quad , \tag{4}$$

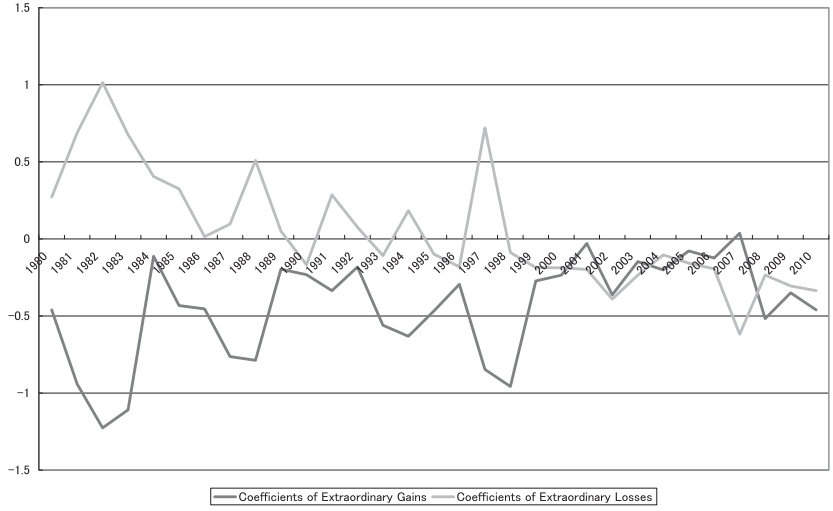
$$OrdinaryIncome_{i,t} = \beta_1 + \beta_2 * ExtraGains_{i,t} + \beta_3 * ExtraLosses_{i,t} + \beta_4 * Sales_{i,t} + \beta_5 * \Delta Sales_{i,t} + \beta_6 * COGS_{i,t} + \beta_7 * SG\&A_{i,t} + \varepsilon_{i,t} \quad , \tag{5}$$

where

$Sales_{i,t}$ = sales in current period t,
$\Delta Sales_{i,t}$ = change of sales from t-1 period,
$DebtEquity_{i,t}$ = debt-to-equity ratio,
$COGS_{i,t}$ = cost of goods sold, and
$SG\&A_{i,t}$ = selling, general and administrative expenses.

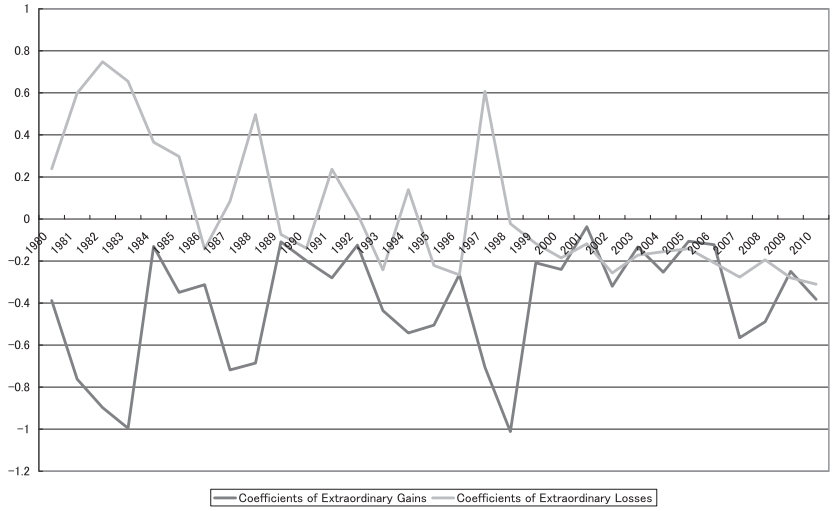
In the additional tests, I use sales, change of sales, DebtEquity, COGS and SG&A as control variables. Since there is no theory in the existing literature to guide in estimating the levels of ordinary income for Japanese firms, I use sales and change of sales as the control variables. As in Darrough, Pourjalali and Saudagaran (1998), I also add DebtEquity to the regression.(19) In

Figure 4 Time Series Coefficients of Extraordinary Gains and Losses – Controlling for Sales and Change of Sales



$$OrdinaryIncome_{i,t} = \beta_1 + \beta_2 * ExtraGains_{i,t} + \beta_3 * ExtraLosses_{i,t}$$
$$\beta_4 * Sales_{i,t} + \beta_5 * \Delta Sales_{i,t} + \varepsilon_{i,t}$$

Figure 5 Time Series Coefficients of Extraordinary Gains and Losses – Controlling for Sales, Change of Sales and Debt to Equity Ratio



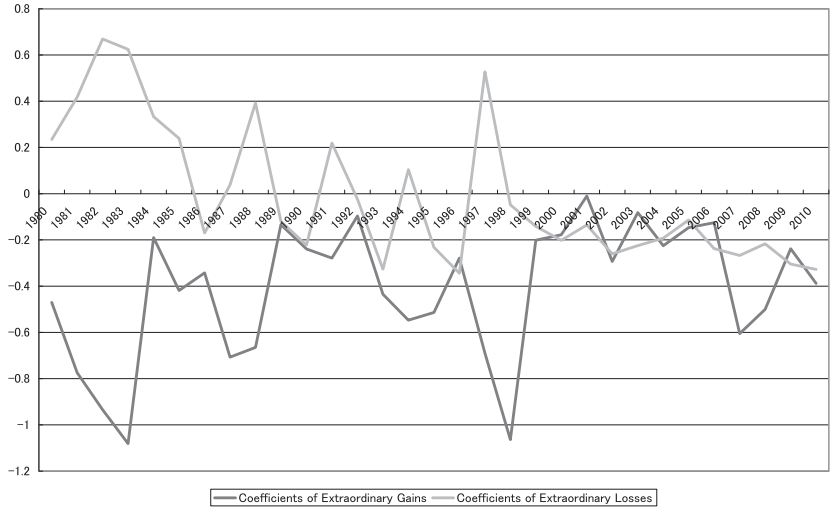
$$OrdinaryIncome_{i,t} = \beta_1 + \beta_2 * ExtraGains_{i,t} + \beta_3 * ExtraLosses_{i,t}$$
$$\beta_4 * Sales_{i,t} + \beta_5 * \Delta Sales_{i,t} + \beta_6 * DebtEquity_{i,t} + \varepsilon_{i,t}$$

line with the real activities literature, such as Mande, File and Kwak (2000) and Roychowdhury (2006), I also add COGS and SG&A as control variables. In addition, I also try to take Anderson, Banker and Janakiraman (2002) into consideration by adding all control variables to estimation regression.

Results (untabulated) I obtain from the additional tests are qualitatively the same as the results reported in the previous section. To show this, I plot the coefficients obtained from estimation models (3)–(5) into Figure 4, Figure 5 and Figure 6. The trend of coefficients plotted in the figures shows identical symmetric patterns. The results presented in Figure 4, Figure 5 and Figure 6 are consistent with the results I have presented in the previous sec-

(19) I note that evidence presented in Darrough, Pourjalali and Saudagaran (1998) shows that debt-to-equity only works in the 1990s.

Figure 6 Time Series Coefficients of Extraordinary Gains and Losses – Controlling for Sales and Change of Sales, COGS, and SG&A



$$OrdinaryIncome_{i,t} = \beta_1 + \beta_2 * ExtraGains_{i,t} + \beta_3 * ExtraLosses_{i,t}$$
$$\beta_4 * Sales_{i,t} + \beta_5 * \Delta Sales_{i,t} + \beta_6 * COGS_{i,t} + \beta_7 * SG\ \&\ A_{i,t} + \varepsilon_{i,t}$$

tion, suggesting that Japanese firms, at their discretion, report income-increasing/income-decreasing extraordinary items to operationally increase/decrease earnings.

7. Concluding Remarks

This paper investigates the behavior of Japanese firms' reporting on extraordinary items. Japanese GAAP treats extraordinary items as non-recurring items and material restatement resulting from corrections of error. I find evidences that Japanese firms might discretionary report more extraordinary gains relative to extraordinary losses or more extraordinary losses relative to extraordinary losses to operationally overstate the core earnings (i.e., ordinary income defined in Japanese GAAP) through classification shift before a series of accounting reforms (or the Accounting Big Bang) took place

in Japan in the late 1999s. This is consistent with our hypothesis that Japanese firms manage earnings through classification shifting. Our results are also confirm that Herrmann, Inoue and Thomas (2003) that Japanese firms manage earnings through assets sales. However, the evidence suggests that since fiscal 2000, Japanese firms report more extraordinary gains than extraordinary losses, suggesting that our classification shifting hypothesis and assets sales earnings management proposed by Herrmann, Inoue and Thomas (2003) may not sustain after fiscal 2000. I suggest that this is mainly because, with the mark-to-market accounting and fixed assets impairment being introduced to the Japanese GAAP, unrealized holding gains fixed assets and unrealized holding gains and losses from securities may be restricted in statements of income prepared according to the Japanese GAAP.

Our results also have implications for the policy makers and regulators. It is argued that since the classification of extraordinary items provides Japanese firms with an option for earnings management; therefore, to prevent Japanese firms from managing earnings using extraordinary items, Japanese firms should no longer be allowed to recognize extraordinary items. Herrmann, Inoue and Thomas (2003) and our results both show that Japanese firms manage earnings by selling assets. Our results further present visual exhibits on the symmetric reporting behaviors of Japanese firms on extraordinary gains and losses before the accounting reforms. However, since it is relatively easier for Japanese firms to manage earnings using through extraordinary items, this also suggests that financial statement users can easily find out whether Japanese firms manage earnings by examining extraordinary items they report.

Since the late 1990s, Japan started a series of accounting standards reforms striving for the global convergence and international harmonization of accounting standard and financial reporting. With the formats of the financial statements prepared according to Japanese GAAP become identical to IFRS, it becomes harder for researchers to exploit earnings management behaviors of Japanese firms stem from the differences between accounting

standards. Future research may try to exploit earnings management behaviors of Japanese firms by examining characteristics of Japanese firms such as board structure or ownership structure.

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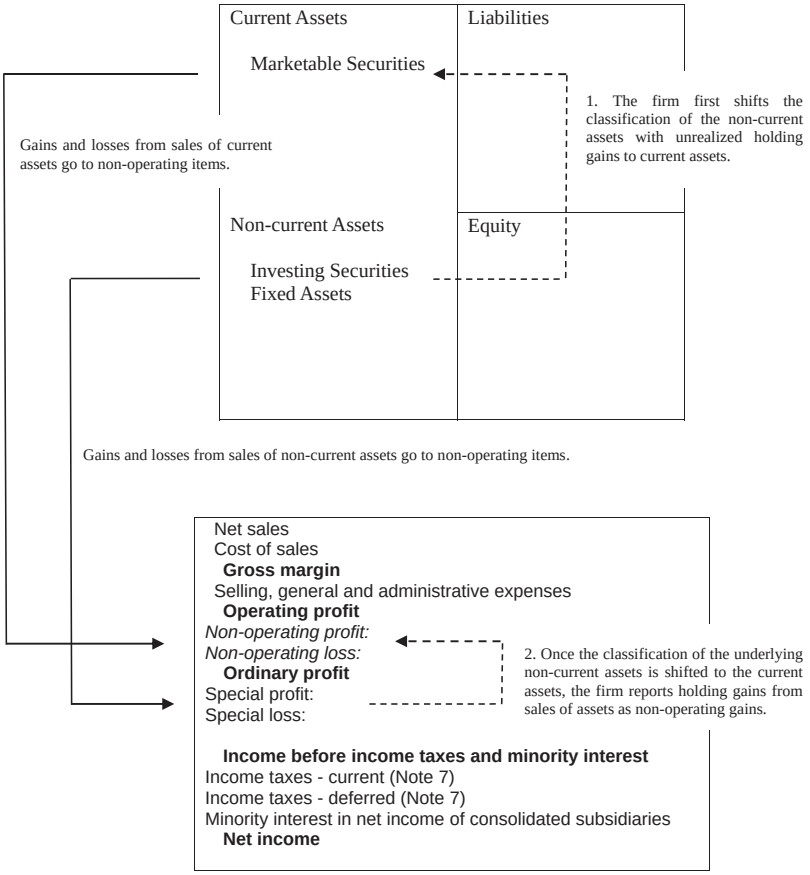
Appendix 1 Format of Consolidated Statement of Income of Japan GAAP

The following 2007 fiscal end statement of income prepared by Nippon Steel is extracted for the presentation of the format of the "Consolidated Statement of Income" of Japanese GAAP.

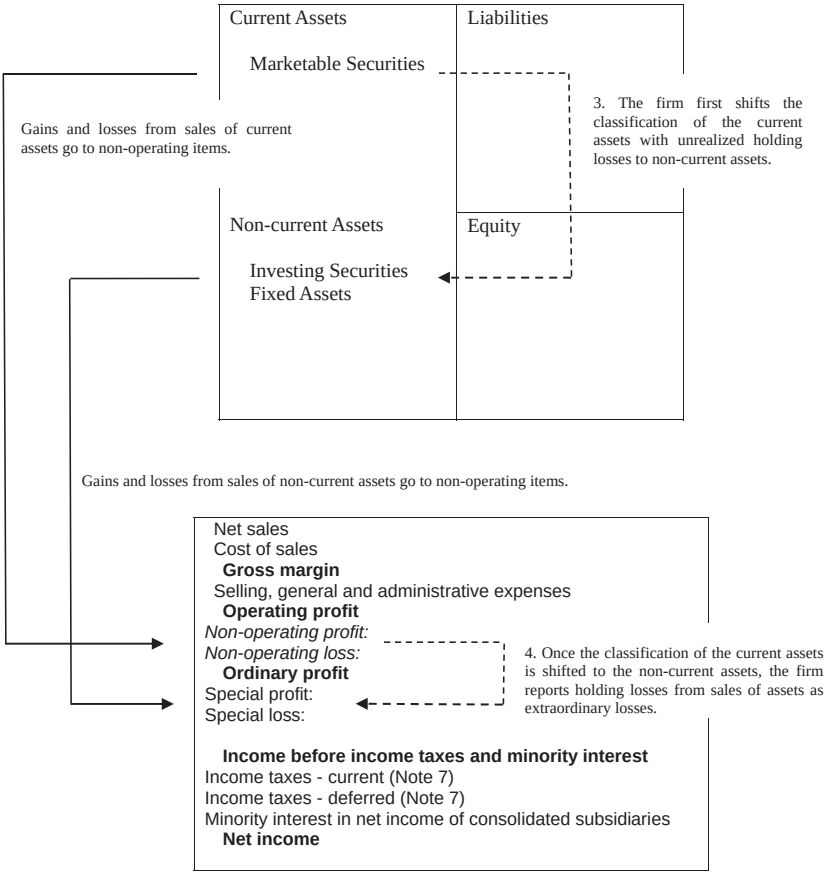
Nippon Steel Corporation and Consolidated Subsidiaries
Years ended March 31, 2007, 2006 and 2005

	Millions of yen			Thousands of U.S. dollars (Note 3)
	2007	2006	2005	2007
Net sales	¥4,302,145	¥3,906,301	¥3,389,356	$36,443,415
Cost of sales	3,408,197	3,063,154	2,693,603	28,870,796
Gross margin	893,947	843,147	695,753	7,572,618
Selling, general and administrative expenses (Note 8, 9 and 10)	313,849	266,828	265,805	2,658,617
Operating profit	580,097	576,319	429,948	4,914,000
Non-operating profit:				
Interest and dividend income	23,427	14,512	9,336	198,451
Equity in net income of unconsolidated subsidiaries and affiliates	43,480	28,227	22,931	368,319
Exchange gain on foreign currency transactions	—	8,523	—	—
Miscellaneous	22,591	17,421	13,942	191,369
	59,498	68,685	46,210	758,140
Non-operating loss:				
Interest expense	15,218	15,787	20,278	128,915
Loss on disposal of fixed assets	12,859	35,471	33,468	108,935
Miscellaneous	43,877	46,346	50,964	371,684
	71,955	97,604	104,711	609,535
Ordinary profit	597,640	547,400	371,446	5,062,605
Special profit:				
Gain on sales of tangible fixed assets (Note 11)	17,765	14,881	4,294	150,488
Gain on sales of investments in securities and investments in subsidiaries and affiliates	6,013	3,325	5,030	50,940
	23,778	18,207	9,324	201,428
Special loss:				
Amortization of transition obligation in respect of the new accounting standard for retirement benefits (Note 11)	—	—	4,295	—
Loss on accidents at works (Note 11)	—	—	3,066	—
Loss on restructuring of subsidiary's business structures (Note 11)	—	—	3,923	—
	—	—	11,285	—
Income before income taxes and minority interest	621,419	565,607	369,485	5,264,033
Income taxes - current (Note 7)	225,566	223,254	155,082	1,910,768
Income taxes - deferred (Note 7)	23,038	(17,061)	(18,869)	195,155
Minority interest in net income of consolidated subsidiaries	21,632	15,510	11,671	183,247
Net income	¥351,182	¥343,903	¥220,601	$2,974,862

Appendix 2 Earnings management by selling assets with unrealized holding gains



Appendix 3 Earnings management by selling assets with unrealized holding losses



Appendix 4 Major Accounting Standards in the 1990s Set Forth by the Business Accounting Deliberation Council, an advisory body to the Minister of Finance of the Government of Japan

Accounting Standard	Ratified	Effective	Specific Descriptions
Consolidated Reporting#	June 1997	April 1999	
Cash Flow Statement	March 1998	April 1999	
Interim Consolidated Reporting	March 1998	April 1999	
Research and Development Costs	March 1998	April 1999	Full expensing of R&D
Deferred Tax Asset	March 1998	*April 1999	Carry forward: 5 years Carry backward: not allowed
Retirement Benefits	June 1998	April 2000	
Market to Market Accounting	January 1999	April 2000	Marketable securities
Impairment for Fixed-Asset	August 2000	**April 2005	
Business Combination	October 2003	April 2006	

full-fledged revision
* option to exercise the standard one year prior to the effective date
** option to exercise the standard two year prior to the effective date